Storage and Conveyance Refinement Program
Workplan Summary
May 21, 1998

PROGRAM GOALS

Evaluate potential storage and conveyance facilities that might contribute to the multiple Program objectives of improving ecosystem health, water supply reliability, water quality, and levee system integrity. Develop and refine information to support programmatic decisions including conceptual configurations, operation plans, engineering feasibility, cost estimates, environmental impacts, water supply and quality benefits for consumptive and environmental purposes. Develop supporting information for subsequent site-specific environmental documentation and permit processes.

PROGRAM DESCRIPTION

Workplan tasks are categorized here as Core Tasks, Critical Tasks, and Other Tasks. Core Tasks are essential to support other studies and maintain coordination with other Program activities. Critical Tasks are special studies that have a high level of interest from agencies and stakeholders. The additional information these studies could provide may be critical for completion of Phase II. Other Tasks include miscellaneous studies that would provide useful information but may be less critical for completion of Phase II.

Core Tasks

1. Storage and Conveyance Facilities Inventory and Cost Estimates. Maintain storage and conveyance facilities inventory. Maintain cost estimate database. Refine prefeasibility studies of selected storage and conveyance facilities. Finalize facilities cost report for 12 DPEIS/EIR alternative configurations. Review Ag/Urban Group cost estimates and reconcile differences. *Refined cost estimates completed by August 1998 for inclusion in Revised Draft PEIS/EIR. Further refinement efforts continuing through Phase II.*

2. Facility Operations Evaluations. Refine modeling studies to improve evaluation of potential benefits and impacts of storage and conveyance facilities. Refine DWRSIM system operations modeling to more accurately reflect Program assumptions. Conduct sensitivity evaluations of operation assumptions. Conduct Delta simulation modeling to incorporate improved system operation modeling and provide a more uniform evaluation of alternatives. Refine evaluations of CVPIA (b)(2) actions. Refine water supply reliability evaluation for revised Draft PEIS/EIR. Support Diversion Effects on Fisheries and Water Quality Program Work Groups. Evaluate ERPP water management strategies. *Refined operations modeling and Delta simulation modeling completed by August 1998 for inclusion in Revised Draft PEIS/EIR. Further refinement efforts and sensitivity analyses continuing through Phase II.*

3. Proposition 204 Reservoir Study Support. Support and coordinate with DWR's Proposition 204 Reservoir Studies. Participate in Technical Advisory Group. Provide guidance on design and operation issues. *Work continuing through Phase II.*

4. PEIR/EIS Support. Participate in public hearings. Respond to comments on initial draft PEIS/EIR. Revise and edit final draft PEIR/EIS. *Work continuing through Phase II.*

5. Public Outreach. Attend and conduct workshops, conferences, and meetings. Respond to requests from agencies, stakeholders, and media. *Work continuing through Phase II.*

Critical Tasks

1. Reservoir Screening Process. Refine list of alternative reservoirs to support programmatic decisions regarding potential storage in the Program preferred alternative. Perform initial screening of potential reservoir alternatives as a foundation for a Phase III CWA Section 404(b)(1) alternative analysis. Specific tasks include: 1) finalize inventory of potential reservoir projects, 2) refine cost estimates, 3) conduct preliminary operation studies to estimate potential water supply benefits, 4) evaluate alternative water management options, 5) conduct economic evaluations to determine practicability, 6) perform screening, and 7) coordinate with interagency reservoir screening committee. *Complete draft initial screening report August 1998. Eliminate alternatives that are clearly impracticable for engineering and economic reasons.*

Economic Evaluation of Water Management Alternatives. Conduct economic evaluations of potential water management alternatives. Work is proceeding under short-term and long-term analytical approaches as follows:

Short-Term Analytical Approach. Develop information to illustrate the relative statewide economic effects of supply augmentation, demand management, and water transfer options. In coordination with agencies and key stakeholders, develop water management scenarios for evaluation. Assume water supply allocations and distributions that might result from these water management scenarios. Using economic models such as CVPM and LCPSIM, evaluate relative statewide economic impacts of these water management scenarios. Qualitatively describe environmental and social impacts. *Interim results of the evaluation of a limited number of water management scenarios complete August 1998. Refinement continuing through Phase II.*

Long-Term Analytical Approach. Clarify relevant institutional and operational constraints and develop tools necessary to formulate a least-cost planning approach to statewide water management issues. Work with agencies and key stakeholders to develop required linkages among hydrologic and economic models such as DWRSIM, CVGSM, CVPTM, LCPSIM, and IMPLAN to reflect constraints due to the physical system, water rights, and third party impacts. Coordinate with and support other relevant economic study efforts such as the Howitt and Lund "Quantitative Analysis of Finance Options for California's Future Water Supply," currently underway at U.C. Davis. *Formulate agency and stakeholder workgroup June 1998. Work continuing through Phase II.*

3. Groundwater/Conjunctive Use Evaluations. Continue Groundwater Outreach Program. Coordinating with agencies and stakeholders, refine list of principles and formulate a framework for CALFED's role in planning and implementing groundwater conjunctive use programs. Evaluate specific proposals for conjunctive use projects. *Complete draft outline for a framework for CALFED's role in implementing conjunctive use projects August 1998. Work continuing through Phase II.*

Other Tasks

1. Special Studies. Study design and cost effects of phased implementation of storage and conveyance componenets. Support development of draft implementation plan. Refine Isolated Conveyance Facility conceptual design. Evaluate feasibility of east Delta agricultural water service from an Isolated Conveyance Facility and other potential in-Delta water quality fixes. Prepare summary report summer 1998. Refine conceptual design of south Delta SWP and CVP facilities. Complete evaluation of South Fork Mokelumne configuration of Alternative 2. Evaluate effects on consumptive use of converting Delta agricultural land to wetlands. *Complete evaluation of South Fork Mokelumne configuration of Alternative 2 August 1998. Other work ongoing through Phase II.*

2. Flood Control Evaluations. Evaluate effects of Delta conveyance improvements on north and south Delta flood protection. Coordinating with Sacramento County, SAFCA, and other stakeholders, complete evaluation of north Delta conveyance improvements using the DWOPER model. Prepare summary report summer 1998. Formulate conceptual plan for south Delta flood control. Evaluate tools for evaluating potential flood control benefits. *Interim report on evaluation of north Delta flood control complete August 1998. Other work ongoing through Phase II.*

3. Model Development. Support development and implementation of artificial neural network in DWRSIM. Support development of new system operations model (replacement for DWRSIM). Investigate development of new Sacramento Valley ground water model. *Work continuing through Phase II.*

ISSUES AND CONCERNS

Defining the Range of Storage in the Preferred Alternative. There is a desire among some agencies and stakeholders to refine the range of surface storage to be included in CALFED's preferred alternative. A more definitive picture of where and how much storage might be built could provide assurances to all stakeholders. However, significantly refining the currently defined range will be difficult due to the programmatic nature of our Phase II evaluations. More detailed evaluation (including environmental field studies) will be required to define which reservoir alternatives are ultimately implementable under State and federal regulations. Until specific implementable alternatives are identified, it may not be possible to specify costs and benefits of surface storage with sufficient detail to allow potential beneficiaries to determine their interest in participation.

Work is underway to complete an initial screening of surface storage alternatives by August 1998. Using our broad inventory of potential projects, estimates of costs and potential water supply benefits are being completed. A least cost planning model will be used to evaluate South Coast water management options to determine a level of economic practicability for new surface storage. This relatively high level of affordability will be used for this initial coarse level of screening to eliminate clearly impracticable alternatives. Additionally, the planned evaluation of alternative water management strategies will provide insight into the economic viability of alternatives to new surface storage. Future screening work will include consideration of the potential environmental impacts of the remaining alternatives.

Economic Evaluation of Water Management Alternatives. Several agencies and stakeholders have suggested that CALFED needs a more thorough economic analysis of water management options and should identify the most cost-effective means of achieving the Program's water supply reliability goals. Completing a valid least-cost water management plan on a statewide basis is a challenging goal due to the need to define and simplify many complex issues including: institutional constraints, Delta conveyance constraints, surface water – ground water interactions, third party impacts, and environmental impacts. Considerable time and effort will be required to develop a comprehensive analytical approach for evaluating the hydrologic and economic impacts associated with various combinations of water supply and demand management options. More time and effort will be required to reach some level of consensus on the many simplifying assumptions needed to manage such a complex study.

Given these difficulties, a two-part approach to providing a comprehensive economic evaluation of water management alternatives is envisioned. First, existing system operation and economic models will be used to provide an initial evaluation of the relative economic impacts of specific assumed water supply allocations and distributions. These allocations and distributions would represent assumed results of various demand management or water transfer actions. Second, the Program will support the development of a more comprehensive analytical approach that could assist in the development of a more tenable statewide least-cost water management plan over the next several years. CALFED will seek input and guidance from agencies and stakeholders during this development effort. Additionally, coordination will continue with other research efforts such as the Howitt and Lund "Quantitative Analysis of Finance Options for California's Future Water Supply," currently underway at U.C. Davis.

Development of Groundwater Conjunctive Use Implementation Plan. There is general support for developing specific groundwater conjunctive use plans for both the Program preferred alternative and the first stage implementation plan. During Phase II, the Program has achieved some success in working with stakeholders and generating principles for implementing conjunctive use programs through our Groundwater Outreach Program. To move towards implementation, a framework for CALFED's role (relative to the role of responsible state and local agencies) in implementing specific projects must be developed. Different approaches, ranging from facilitating programs through operation of a clearinghouse, to a more active role as proponent for specific projects are possible. During the remainder of this year, CALFED will work with agencies and stakeholders and outline an approach for CALFED's role in implementing conjunctive use projects, while also developing additional information on specific proposals that might be included in the first stage of the implementation plan.